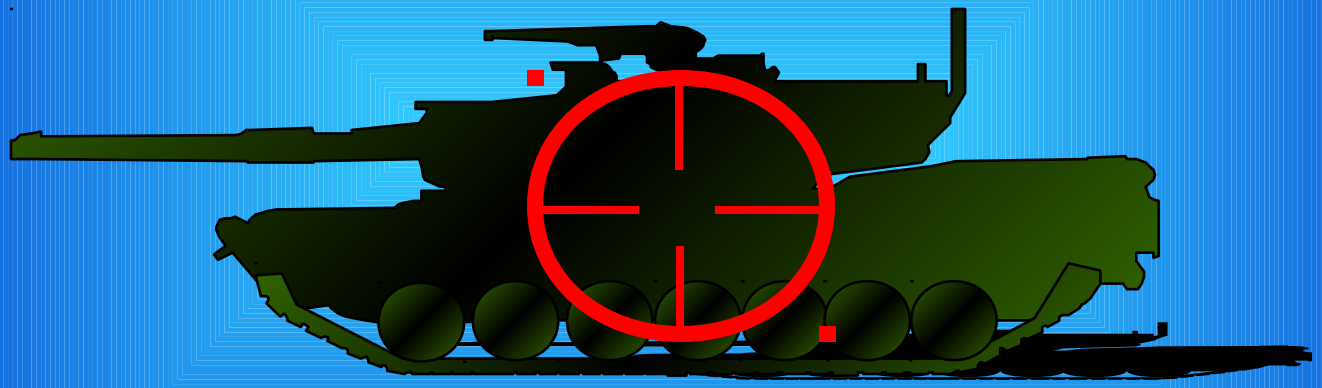
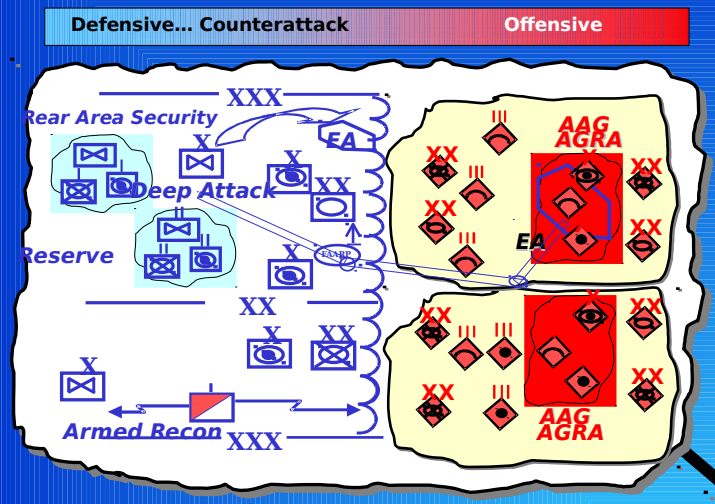
M1A2 SEP Vulnerabilities



Threat Model



Strategic Culminating Point

Intangibles
Public Support
Leadership
Will to Fight
Alliances/Coalitions
Strategy & Doctrine

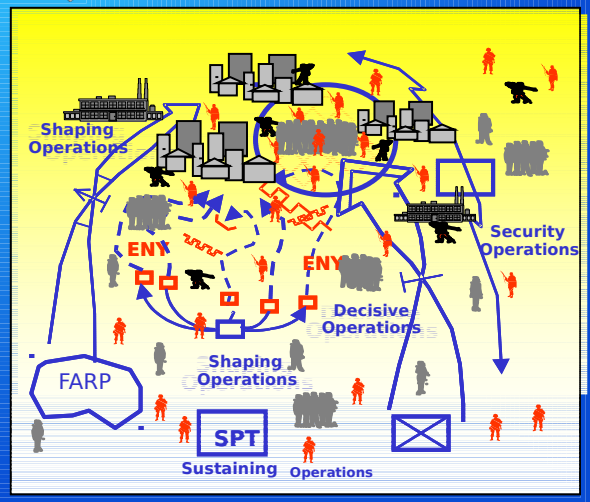
Conventional Operations

Offense

Transition Operations

Access Denial
IO
Terrorism
Precision Strike
Economic
Diplomatic

Strategic Operations

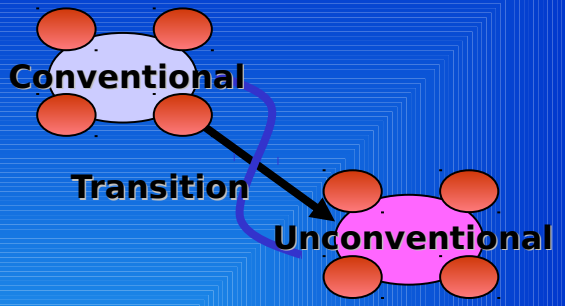


Unconventional Operations

Defense

US Dominance → Uncertainty

Threat Capabilities



Conventional Operations

Internal Security
- Local, Regional, National & Secret Police
- Para-military Organizations
- Civilian Mobilization

Regional Threats
- Armored and Mechanized Forces
- Long Range Artillery and Rockets
- Fixed and Rotary Wing Air Forces
- UAVs and Night Vision
- Medium Range Missiles
- Coastal Navy
- HUMINT/SOF

Access Denial
- IO

Transition Operations

Transition
- Engineers
- Pre-positioned - logistics
- Hardened C2
- Deception

Protecting Regional Gains
- Armored and Mechanized Forces
- Regional Police
- Rotary Wing Air Forces
- HUMINT/SOF

Access Denial
- Air and Missile Defenses
- Theater Ballistic Missiles
- Chemical/ Biological Weapons
- HUMINT/SOF

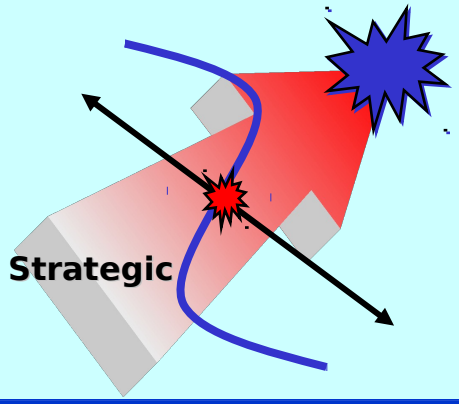
Unconventional Operat

Preservation
- Camouflage, Concealment, Cover Deception and Denial
- Redundant C2

Access Denial
- Counter - precision, ISR & mobility

Controlling the Conflict Environment
- All Elements of National Power
- Precision Fires & Recon Strike
- Mobile/ Mechanized Reserves
- Commercial Technical ISR

Strategic Operations

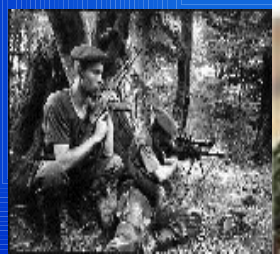


- Information Operations: EW, cyber-attack, protection and security
- Diplomatic initiatives
- Economic leverage
- Terrorist attacks
- Precision strike - TBM
- Weapons of Mass Effects

Changing Operational Environmen

Physical Environment:

- Prescribes nature of the conflict & nature of forces that fight
- Urban areas growing 3 times faster than population
  - 60% of world's population will live in cities
  - ***Urban warfare virtually assured***
- Urban settings degrade U.S. technological and platform based superiority, limit precision strike and maneuver
  - More manpower versus "system centric"
- Human issues add complexity
- Increased Govt / NGO / PVO / criminal influence
- With increased urbanization, adversary use of urban/complex terrain to gain advantage and offset US force capabilities ***highly likely***



Emergence of "fighters" vs soldiers:

Not organized in the traditional sense

- Primarily defending their ethnic group, religion, clan or tribe
- Emergence of a "Warrior Class" whose desire to fight and kill exceeds their desire to live
- In the fight for the "long haul"
- Unconstrained ROE vs. US constrained ROE
- Increasingly includes criminal & terrorist elements

M1A2 SEP Technical Vulnerabilities

Precision/highly lethal weapons

- Improved KE Munitions
- Air/Artillery delivered HPM
- DPICM/TGSM
- ATGM/RPG
- Tandem HEAT
- Mines
- WMD/E
- NBC
- Flame

Other Threats

- GPS Jamming
- Integrated EW Attack
- Physical Attack of C2

Non Lethal Weapons

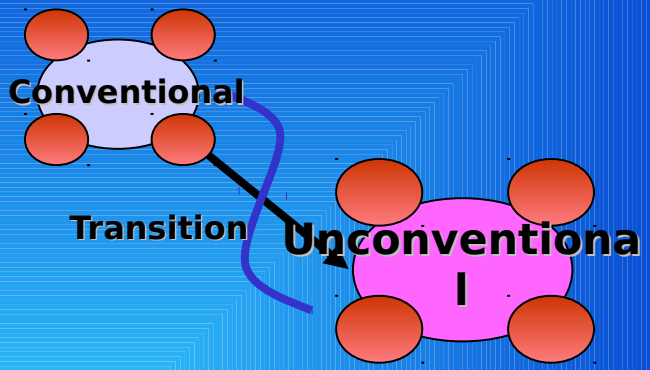
- Laser
- HPM

Vulnerabilities extend beyond bombs and b

Attacking M1A2 SEP Non-Technical Vulnerabilities

Purpose

- Exploit complex environments
- Preserve combat power while sapping the enemy's will and capability to fight
- Cause casualties
- Neutralize technological overmatch
- Deny access and avoid losing



Patterns of Operation

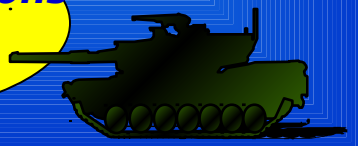
- Conventional, asymmetric and adaptive
- Both offensive and defensive
- Dispersed, decentralized & distributed
- Control tempo and conflict environment
- Interdict APODs /SPODs

Non-linear Operations
OPTEMPO
Threat Identification
Threat RSTA
Terrorism
Sustainment

Sharing the night

Complex/Urban Terrain
Vectors
Humanism

Information Operations
Threat CCD



M1A2 SEP Threat Implications

M1A2 SEP Operational Environment Highlights

- A wider spectrum of operations, increased threat technological capability and unpredictability leading to a more complex and challenging range of operational environments
- In association with an Adaptive and Adoptive Threat
  - A Challenge to independent maneuver
  - Complex and difficult maneuver support requirements
  - Enhances necessity for Combined Arms Operations
  - Extremely lethal close combat environment
  - Degradation of U.S. technological superiority
  - Changed target sets
  - Challenges U.S. preferred method of attack... long range precision attack